

Differential complex associated to closed differential forms of nonconstant rank

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Abstract

In the present paper we construct a complex of sheaves associated to a closed differential form ω . We study this complex in case ω is a) a closed 1-form vanishing at an embedded submanifold, b) a symplectic structure with Martinet singularities. In particular, we prove that, under additional conditions on ω , this complex gives a fine resolution for the sheaf of infinitesimal automorphisms of ω .

Keywords

Closed 1-form, Complex of sheaves, Martinet singularity, Sheaf of infinitesimal automorphisms